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International Bureau



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(CIP) to earlier applications:

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Filed on	17 August 1999 (17.08.1999)
US	60/164,203 (CIP)
Filed on	9 November 1999 (09.11.1999)

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DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,
HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,
NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,
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patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,
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CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

(88) Date of publication of the international search report:
6 December 2001

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

WO 01/12662 A3

(54) Title: MEMBRANE ASSOCIATED PROTEINS

(57) Abstract: The invention provides human membrane associated proteins (MEMAP) and polynucleotides which identify and encode MEMAP. The invention also provides expression vectors, host cells, antibodies, agonists, and antagonists. The invention also provides methods for diagnosing, treating, or preventing disorders associated with expression of MEMAP.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/22315

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/12 C07K14/47 C07K14/705 C07K16/18 C07K16/28
C12Q1/68 A61K38/17 A01K67/027 G01N33/50

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N C07K C12Q A61K A01K G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, EMBL, STRAND, MEDLINE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DATABASE EMBL [Online] EMBL; ID AA984180, AC A984180, 28 May 1998 (1998-05-28) HILLIER L ET AL.: "am82a04.s1 Stratagene schizo brain S11 Homo sapiens cDNA clone IMAGE:1629582 3', mRNA sequence" XP002159906 Note: 99.6 % nt seq identity with SEQ ID N0:1 in 500 nt overlap. the whole document</p> <p style="text-align: center;">--- -/--</p>	1-19,22, 25-28

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier document but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
"&" document member of the same patent family

Date of the actual completion of the international search

13 February 2001

Date of mailing of the international search report

15.05.01

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

van de Kamp, M

INTERNATIONAL SEARCH REPORT

 International Application No
 PCT/US 00/22315

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE EMBL [Online] EMBL; ID AI243841, AC AI243841, 5 November 1998 (1998-11-05) STRAUSBERG R: "qh89e04.xl Soares NFL T GBC S1 Homo sapiens cDNA clone IMAGE:1854174 3' similar to contains element MER26 repetitive element ;, mRNA sequence" XP002159907 Note: 100.0 % nt seq identity with SEQ ID NO:1 in 412 nt overlap. the whole document ---	1-19,22, 25-28
X	DATABASE EMBL [Online] embl; ID AC005924, AC AC005924, 5 November 1998 (1998-11-05) MUZNY D ET AL.: "Homo sapiens Chr.14 PAC RPC14-794B2 (Roswell Park Cancer Institute Human PAC Library) complete sequence" XP002159908 Note: 93.4 % nt seq identity of nt 17917-19843 with SEQ ID NO:1 in 1932 nt overlap. page 13 ---	3-5, 11-15
A	--- DALMAU J ET AL.: "Mal, a novel neuron- and testis-specific protein, is recognized by the serum of patients with paraneoplastic neurological disorders" BRAIN, vol. 122, no. 1, January 1999 (1999-01), pages 27-39, XP002159905 Note: 54.7 % aa seq identity of Mal with SEQ ID NO:38 in 333 aa overlap. abstract page 33, left-hand column, line 17 -page 34, left-hand column, line 2; figure 5 page 37, left-hand column, line 9-15 ---	1-7,9-15
A	--- WO 98 21328 A (KATO SEISHI ;PROTEGENE INC (JP); SEKINE SHINGO (JP); SAGAMI CHEM R) 22 May 1998 (1998-05-22) the whole document ---	
A	--- WO 98 22491 A (MILLENNIUM BIOTHERAPEUTICS INC) 28 May 1998 (1998-05-28) the whole document --- -/--	

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/22315

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>YOKOYAMA-KOBAYASHI M ET AL.: "Selection of cDNAs encoding putative type II membrane proteins on the cell surface from a human full-length cDNA bank" GENE, vol. 228, no. 1-2, 4 March 1999 (1999-03-04), pages 161-167, XP004159146 the whole document</p> <p>-----</p>	

INTERNATIONAL SEARCH REPORT

Ir. application No.
PCT/US 00/22315

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Remark (1): Although claims 18, 21 and 24 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition. Concerning claims 21 and 24, see also Remark (2).
2. ☒ Claims Nos.: 20, 21, 23, 24
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-28 all partially

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-28 (all partially)

An isolated polypeptide comprising or consisting of the amino acid sequence of SEQ ID NO:1 or homologs or fragments thereof, an isolated polynucleotide encoding a polypeptide as said, a recombinant polynucleotide containing a polynucleotide as said linked to a promoter, a host cell and a transgenic organism containing a recombinant polynucleotide as said, a method for producing a polypeptide as said, an antibody binding to a polypeptide as said, an isolated polynucleotide comprising a nucleotide sequence of SEQ ID NO:38 or homologs or fragments thereof, methods of detecting a target polynucleotide having a nucleotide sequence of a polynucleotide as said, a pharmaceutical composition comprising a polypeptide as said and the use of a composition as said in medical treatment, methods for screening for a compound that is effective as an agonist or an antagonist of a polypeptide as said, and compositions comprising a agonist or an antagonist as said as well as the use of compositions as said in medical treatment, methods for screening for a compound that binds to a polypeptide as said, that modulates the activity of a polypeptide as said, or that alters the expression of a polynucleotide as said, and a method for assessing the toxicity of a test compound involving the detection of a polynucleotide as said.

2. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 2 and 39.

3. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 3 and 40.

4. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 4 and 41.

5. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 5 and 42.

6. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 6 and 43.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

7. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 7 and 44.

8. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 8 and 45.

9. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 9 and 46.

10. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 10 and 47.

11. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 11 and 48.

12. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 12 and 49.

13. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 13 and 50.

14. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 14 and 51.

15. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 15 and 52.

16. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 16 and 53.

17. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 17 and 54.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

18. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 18 and 55.

19. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 19 and 56.

20. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 20 and 57.

21. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 21 and 58.

22. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 22 and 59.

23. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 23 and 60.

24. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 24 and 61.

25. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 25 and 62.

26. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 26 and 63.

27. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 27 and 64.

28. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 28 and 65.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

29. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 29 and 66.

30. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 30 and 67.

31. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 31 and 68.

32. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 32 and 69.

33. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 33 and 70.

34. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 34 and 71.

35. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 35 and 72.

36. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 36 and 73.

37. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 37 and 74.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 20, 21, 23, 24

Remark (2): Claims 20, 21, 23 and 24 refer to agonists and antagonists of the polypeptide, and to compositions comprising such agonists and antagonists, without giving a true technical characterisation. Moreover, no specific compounds are defined in the application. In consequence, the scope of said claims is ambiguous and vague, and their subject-matter is not sufficiently disclosed and supported (Art. 5 and 6 PCT). No search can be carried out for such purely speculative claims whose wording is, in fact, a mere recitation of the results to be achieved.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

Information on patent family members

Inter-Application No

PCT/US 00/22315

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9821328 A	22-05-1998	AU 4885297 A EP 0941320 A	03-06-1998 15-09-1999
WO 9822491 A	28-05-1998	US 5952171 A AU 5354798 A EP 0948519 A	14-09-1999 10-06-1998 13-10-1999

PATENT COOPERATION TREAT

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner
 US Department of Commerce
 United States Patent and Trademark
 Office, PCT
 2011 South Clark Place Room
 CP2/5C24
 Arlington, VA 22202
 ETATS-UNIS D'AMERIQUE
 in its capacity as elected Office

Date of mailing (day/month/year) 12 July 2001 (12.07.01)	
International application No. PCT/US00/22315	Applicant's or agent's file reference PF-0731 PCT
International filing date (day/month/year) 14 August 2000 (14.08.00)	Priority date (day/month/year) 17 August 1999 (17.08.99)
Applicant LAL, Preeti et al	

1. The designated Office is hereby notified of its election made:



in the demand filed with the International Preliminary Examining Authority on:

15 March 2001 (15.03.01)



in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was

was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Claudio Borton Telephone No.: (41-22) 338.83.38
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MAY 21 2001

PATENT COOPERATION TREAT.

From the INTERNATIONAL SEARCHING AUTHORITY

PCT

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL SEARCH REPORT
OR THE DECLARATION

(PCT Rule 44.1)

To:

INCYTE GENOMICS, INC.
Attn. HAMLET-COX, Diana
3160 Porter Drive
Palo Alto, CA 94304
UNITED STATES OF AMERICA

Date of mailing
(day/month/year)

15/05/2001

Applicant's or agent's file reference

PF-0731 PCT

FOR FURTHER ACTION

See paragraphs 1 and 4 below

International application No.

PCT/US 00/22315

International filing date

(day/month/year)

14/08/2000

Applicant

INCYTE GENOMICS, INC. et al.

1. ☒ The applicant is hereby notified that the International Search Report has been established and is transmitted herewith.

Filing of amendments and statement under Article 19:

The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):

When? The time limit for filing such amendments is normally 2 months from the date of transmittal of the International Search Report; however, for more details, see the notes on the accompanying sheet.

Where? Directly to the International Bureau of WIPO
34, chemin des Colombettes,
1211 Geneva 20, Switzerland
Facsimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no International Search Report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.

3. ☐ With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Further action(s):** The applicant is reminded of the following:

Shortly after **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90*bis*.1 and 90*bis*.3, respectively, before the completion of the technical preparations for international publication.

Within **19 months** from the priority date, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later).

Within **20 months** from the priority date, the applicant must perform the prescribed acts for entry into the national phase before all designated Offices which have not been elected in the demand or in a later election within 19 months from the priority date or could not be elected because they are not bound by Chapter II.

Name and mailing address of the International Searching Authority



European Patent Office, P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Mireille Claudepierre

NOTES FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the PCT Applicant's Guide, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions, respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only.

What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When?

Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been/is filed, see below.

How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

What documents must/may accompany the amendments?

Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

NOTES TO FORM PCT/ISA/220 (continued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- (i) the claim is unchanged;
- (ii) the claim is cancelled;
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed.

The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

1. [Where originally there were 48 claims and after amendment of some claims there are 51]:
"Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
2. [Where originally there were 15 claims and after amendment of all claims there are 11]:
"Claims 1 to 15 replaced by amended claims 1 to 11."
3. [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:
"Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or
"Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
4. [Where various kinds of amendments are made]:
"Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

"Statement under article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

It must be in the language in which the international application is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments and any accompanying statement, under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the time of filing the amendments (and any statement) with the International Bureau, also file with the International Preliminary Examining Authority a copy of such amendments (and of any statement) and, where required, a translation of such amendments for the procedure before that Authority (see Rules 55.3(a) and 62.2, first sentence). For further information, see the Notes to the demand form (PCT/IPEA/401).

Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see Volume II of the PCT Applicant's Guide.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference PF-0731 PCT	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/US 00/ 22315	International filing date (day/month/year) 14/08/2000	(Earliest) Priority Date (day/month/year) 17/08/1999
Applicant INCYTE GENOMICS, INC. et al.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 10 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☒ contained in the international application in written form.

☒ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☒ **Certain claims were found unsearchable** (See Box I).

3. ☒ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No. _____

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☐ None of the figures.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 00/22315

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Remark (1): Although claims 18, 21 and 24 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition. Concerning claims 21 and 24, see also Remark (2).
2. ☒ Claims Nos.: 20, 21, 23, 24
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-28 all partially

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-28 (all partially)

An isolated polypeptide comprising or consisting of the amino acid sequence of SEQ ID NO:1 or homologs or fragments thereof, an isolated polynucleotide encoding a polypeptide as said, a recombinant polynucleotide containing a polynucleotide as said linked to a promoter, a host cell and a transgenic organism containing a recombinant polynucleotide as said, a method for producing a polypeptide as said, an antibody binding to a polypeptide as said, an isolated polynucleotide comprising a nucleotide sequence of SEQ ID NO:38 or homologs or fragments thereof, methods of detecting a target polynucleotide having a nucleotide sequence of a polynucleotide as said, a pharmaceutical composition comprising a polypeptide as said and the use of a composition as said in medical treatment, methods for screening for a compound that is effective as an agonist or an antagonist of a polypeptide as said, and compositions comprising a agonist or an antagonist as said as well as the use of compositions as said in medical treatment, methods for screening for a compound that binds to a polypeptide as said, that modulates the activity of a polypeptide as said, or that alters the expression of a polynucleotide as said, and a method for assessing the toxicity of a test compound involving the detection of a polynucleotide as said.

2. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 2 and 39.

3. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 3 and 40.

4. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 4 and 41.

5. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 5 and 42.

6. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 6 and 43.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

7. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 7 and 44.

8. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 8 and 45.

9. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 9 and 46.

10. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 10 and 47.

11. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 11 and 48.

12. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 12 and 49.

13. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 13 and 50.

14. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 14 and 51.

15. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 15 and 52.

16. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 16 and 53.

17. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 17 and 54.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

18. Claims: 1-28 (all partially)
As invention 1, but concerning SEQ ID N0s 18 and 55.
19. Claims: 1-28 (all partially)
As invention 1, but concerning SEQ ID N0s 19 and 56.
20. Claims: 1-28 (all partially)
As invention 1, but concerning SEQ ID N0s 20 and 57.
21. Claims: 1-28 (all partially)
As invention 1, but concerning SEQ ID N0s 21 and 58.
22. Claims: 1-28 (all partially)
As invention 1, but concerning SEQ ID N0s 22 and 59.
23. Claims: 1-28 (all partially)
As invention 1, but concerning SEQ ID N0s 23 and 60.
24. Claims: 1-28 (all partially)
As invention 1, but concerning SEQ ID N0s 24 and 61.
25. Claims: 1-28 (all partially)
As invention 1, but concerning SEQ ID N0s 25 and 62.
26. Claims: 1-28 (all partially)
As invention 1, but concerning SEQ ID N0s 26 and 63.
27. Claims: 1-28 (all partially)
As invention 1, but concerning SEQ ID N0s 27 and 64.
28. Claims: 1-28 (all partially)
As invention 1, but concerning SEQ ID N0s 28 and 65.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

29. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 29 and 66.

30. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 30 and 67.

31. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 31 and 68.

32. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 32 and 69.

33. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 33 and 70.

34. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 34 and 71.

35. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 35 and 72.

36. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 36 and 73.

37. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 37 and 74.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 20, 21, 23, 24

Remark (2): Claims 20, 21, 23 and 24 refer to agonists and antagonists of the polypeptide, and to compositions comprising such agonists and antagonists, without giving a true technical characterisation. Moreover, no specific compounds are defined in the application. In consequence, the scope of said claims is ambiguous and vague, and their subject-matter is not sufficiently disclosed and supported (Art. 5 and 6 PCT). No search can be carried out for such purely speculative claims whose wording is, in fact, a mere recitation of the results to be achieved.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

International Application No

P S 00/22315

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/12 C07K14/47 C07K14/705 C07K16/18 C07K16/28
C12Q1/68 A61K38/17 A01K67/027 G01N33/50

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N C07K C12Q A61K A01K G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal, WPI Data, PAJ, EMBL, STRAND, MEDLINE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DATABASE EMBL [Online] EMBL; ID AA984180, AC A984180, 28 May 1998 (1998-05-28) HILLIER L ET AL.: "am82a04.s1 Stratagene schizo brain S11 Homo sapiens cDNA clone IMAGE:1629582 3', mRNA sequence" XP002159906 Note: 99.6 % nt seq identity with SEQ ID NO:1 in 500 nt overlap. the whole document</p> <p style="text-align: center;">--- -/--</p>	1-19,22, 25-28

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

13 February 2001

Date of mailing of the international search report

15. 05. 01

Name and mailing address of the ISA

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Authorized officer

van de Kamp, M

INTERNATIONAL SEARCH REPORT

International Application No

PO 00/22315

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DATABASE EMBL [Online] EMBL; ID A1243841, AC A1243841, 5 November 1998 (1998-11-05) STRAUSBERG R: "qh89e04.xl Soares NFL T GBC S1 Homo sapiens cDNA clone IMAGE:1854174 3' similar to contains element MER26 repetitive element ;, mRNA sequence" XP002159907 Note: 100.0 % nt seq identity with SEQ ID NO:1 in 412 nt overlap. the whole document</p>	1-19,22, 25-28
X	<p>--- DATABASE EMBL [Online] embl; ID AC005924, AC AC005924, 5 November 1998 (1998-11-05) MUZNY D ET AL.: "Homo sapiens Chr.14 PAC RPC14-794B2 (Roswell Park Cancer Institute Human PAC Library) complete sequence" XP002159908 Note: 93.4 % nt seq identity of nt 17917-19843 with SEQ ID NO:1 in 1932 nt overlap. page 13</p>	3-5, 11-15
A	<p>--- DALMAU J ET AL.: "Mal, a novel neuron- and testis-specific protein, is recognized by the serum of patients with paraneoplastic neurological disorders" BRAIN, vol. 122, no. 1, January 1999 (1999-01), pages 27-39, XP002159905 Note: 54.7 % aa seq identity of Mal with SEQ ID NO:38 in 333 aa overlap. abstract page 33, left-hand column, line 17 -page 34, left-hand column, line 2; figure 5 page 37, left-hand column, line 9-15</p>	1-7,9-15
A	<p>--- WO 98 21328 A (KATO SEISHI ;PROTEGENE INC (JP); SEKINE SHINGO (JP); SAGAMI CHEM R) 22 May 1998 (1998-05-22) the whole document</p>	
A	<p>--- WO 98 22491 A (MILLENNIUM BIOTHERAPEUTICS INC) 28 May 1998 (1998-05-28) the whole document --- -/--</p>	

INTERNATIONAL SEARCH REPORT

International Application No

PCT/JP99/22315

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>YOKOYAMA-KOBAYASHI M ET AL.: "Selection of cDNAs encoding putative type II membrane proteins on the cell surface from a human full-length cDNA bank" GENE, vol. 228, no. 1-2, 4 March 1999 (1999-03-04), pages 161-167, XP004159146 the whole document</p> <p>-----</p>	

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

P S 00/22315

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9821328 A	22-05-1998	AU 4885297 A EP 0941320 A	03-06-1998 15-09-1999
WO 9822491 A	28-05-1998	US 5952171 A AU 5354798 A EP 0948519 A	14-09-1999 10-06-1998 13-10-1999

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference PF-0731 PCT	FOR FURTHER ACTION <small>see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.</small>	
International application No. PCT/US 00/ 22315	International filing date (day/month/year) 14/08/2000	(Earliest) Priority Date (day/month/year) 17/08/1999
Applicant INCYTE GENOMICS, INC. et al.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 10 sheets.
☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :
- ☒ contained in the international application in written form.
- ☒ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☒ **Certain claims were found unsearchable** (See Box I).

3. ☒ **Unity of invention is lacking** (see Box II).

4. With regard to the title,

- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No.

- ☐ as suggested by the applicant. ☐ None of the figures.
- ☐ because the applicant failed to suggest a figure.
- ☐ because this figure better characterizes the invention.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 00/22315

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Remark (1): Although claims 18, 21 and 24 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition. Concerning claims 21 and 24, see also Remark (2).
2. ☒ Claims Nos.: 20, 21, 23, 24
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-28 all partially

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-28 (all partially)

An isolated polypeptide comprising or consisting of the amino acid sequence of SEQ ID NO:1 or homologs or fragments thereof, an isolated polynucleotide encoding a polypeptide as said, a recombinant polynucleotide containing a polynucleotide as said linked to a promoter, a host cell and a transgenic organism containing a recombinant polynucleotide as said, a method for producing a polypeptide as said, an antibody binding to a polypeptide as said, an isolated polynucleotide comprising a nucleotide sequence of SEQ ID NO:38 or homologs or fragments thereof, methods of detecting a target polynucleotide having a nucleotide sequence of a polynucleotide as said, a pharmaceutical composition comprising a polypeptide as said and the use of a composition as said in medical treatment, methods for screening for a compound that is effective as an agonist or an antagonist of a polypeptide as said, and compositions comprising a agonist or an antagonist as said as well as the use of compositions as said in medical treatment, methods for screening for a compound that binds to a polypeptide as said, that modulates the activity of a polypeptide as said, or that alters the expression of a polynucleotide as said, and a method for assessing the toxicity of a test compound involving the detection of a polynucleotide as said.

2. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 2 and 39.

3. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 3 and 40.

4. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 4 and 41.

5. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 5 and 42.

6. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 6 and 43.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

7. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 7 and 44.

8. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 8 and 45.

9. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 9 and 46.

10. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 10 and 47.

11. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 11 and 48.

12. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 12 and 49.

13. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 13 and 50.

14. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 14 and 51.

15. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 15 and 52.

16. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 16 and 53.

17. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 17 and 54.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

18. Claims: 1-28 (all partially)
As invention 1, but concerning SEQ ID NOs 18 and 55.
19. Claims: 1-28 (all partially)
As invention 1, but concerning SEQ ID NOs 19 and 56.
20. Claims: 1-28 (all partially)
As invention 1, but concerning SEQ ID NOs 20 and 57.
21. Claims: 1-28 (all partially)
As invention 1, but concerning SEQ ID NOs 21 and 58.
22. Claims: 1-28 (all partially)
As invention 1, but concerning SEQ ID NOs 22 and 59.
23. Claims: 1-28 (all partially)
As invention 1, but concerning SEQ ID NOs 23 and 60.
24. Claims: 1-28 (all partially)
As invention 1, but concerning SEQ ID NOs 24 and 61.
25. Claims: 1-28 (all partially)
As invention 1, but concerning SEQ ID NOs 25 and 62.
26. Claims: 1-28 (all partially)
As invention 1, but concerning SEQ ID NOs 26 and 63.
27. Claims: 1-28 (all partially)
As invention 1, but concerning SEQ ID NOs 27 and 64.
28. Claims: 1-28 (all partially)
As invention 1, but concerning SEQ ID NOs 28 and 65.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

29. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 29 and 66.

30. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 30 and 67.

31. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 31 and 68.

32. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 32 and 69.

33. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 33 and 70.

34. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 34 and 71.

35. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 35 and 72.

36. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 36 and 73.

37. Claims: 1-28 (all partially)

As invention 1, but concerning SEQ ID NOs 37 and 74.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 20, 21, 23, 24

Remark (2): Claims 20, 21, 23 and 24 refer to agonists and antagonists of the polypeptide, and to compositions comprising such agonists and antagonists, without giving a true technical characterisation. Moreover, no specific compounds are defined in the application. In consequence, the scope of said claims is ambiguous and vague, and their subject-matter is not sufficiently disclosed and supported (Art. 5 and 6 PCT). No search can be carried out for such purely speculative claims whose wording is, in fact, a mere recitation of the results to be achieved.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

International Application No

PC 00/22315

A. CLASSIFICATION OF SUBJECT MATTER					
IPC 7	C12N15/12	C07K14/47	C07K14/705	C07K16/18	C07K16/28
	C12Q1/68	A61K38/17	A01K67/027	G01N33/50	
According to International Patent Classification (IPC) or to both national classification and IPC					
B. FIELDS SEARCHED					
Minimum documentation searched (classification system followed by classification symbols)					
IPC 7 C12N C07K C12Q A61K A01K G01N					
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched					
Electronic data base consulted during the international search (name of data base and, where practical, search terms used)					
EPO-Internal, WPI Data, PAJ, EMBL, STRAND, MEDLINE					
C. DOCUMENTS CONSIDERED TO BE RELEVANT					
Category *	Citation of document, with indication, where appropriate, of the relevant passages				Relevant to claim No.
X	<p>DATABASE EMBL [Online] EMBL; ID AA984180, AC A984180, 28 May 1998 (1998-05-28) HILLIER L ET AL.: "am82a04.s1 Stratagene schizo brain S11 Homo sapiens cDNA clone IMAGE:1629582 3', mRNA sequence" XP002159906 Note: 99.6 % nt seq identity with SEQ ID N0:1 in 500 nt overlap. the whole document</p> <p style="text-align: center;">--- -/--</p>				<p>1-19,22, 25-28</p>
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex.					
<p>* Special categories of cited documents :</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>"&" document member of the same patent family</p>					
Date of the actual completion of the international search			Date of mailing of the international search report		
13 February 2001			15. 05. 01		
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016			Authorized officer van de Kamp, M		

INTERNATIONAL SEARCH REPORT

International Application No

PC 00/22315

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DATABASE EMBL [Online] EMBL; ID AI243841, AC AI243841, 5 November 1998 (1998-11-05) STRAUSBERG R: "qh89e04.x1 Soares NFL T GBC S1 Homo sapiens cDNA clone IMAGE:1854174 3' similar to contains element MER26 repetitive element ;, mRNA sequence" XP002159907 Note: 100.0 % nt seq identity with SEQ ID NO:1 in 412 nt overlap. the whole document</p>	1-19,22, 25-28
X	<p>--- DATABASE EMBL [Online] embl; ID AC005924, AC AC005924, 5 November 1998 (1998-11-05) MUZNY D ET AL.: "Homo sapiens Chr.14 PAC RPC14-794B2 (Roswell Park Cancer Institute Human PAC Library) complete sequence" XP002159908 Note: 93.4 % nt seq identity of nt 17917-19843 with SEQ ID NO:1 in 1932 nt overlap. page 13</p>	3-5, 11-15
A	<p>--- DALMAU J ET AL.: "Mal, a novel neuron- and testis-specific protein, is recognized by the serum of patients with paraneoplastic neurological disorders" BRAIN, vol. 122, no. 1, January 1999 (1999-01), pages 27-39, XP002159905 Note: 54.7 % aa seq identity of Mal with SEQ ID NO:38 in 333 aa overlap. abstract page 33, left-hand column, line 17 -page 34, left-hand column, line 2; figure 5 page 37, left-hand column, line 9-15</p>	1-7,9-15
A	<p>--- WO 98 21328 A (KATO SEISHI ;PROTEGENE INC (JP); SEKINE SHINGO (JP); SAGAMI CHEM R) 22 May 1998 (1998-05-22) the whole document</p>	
A	<p>--- WO 98 22491 A (MILLENNIUM BIOTHERAPEUTICS INC) 28 May 1998 (1998-05-28) the whole document --- -/--</p>	

INTERNATIONAL SEARCH REPORT

International Application No

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>YOKOYAMA-KOBAYASHI M ET AL.: "Selection of cDNAs encoding putative type II membrane proteins on the cell surface from a human full-length cDNA bank" GENE, vol. 228, no. 1-2, 4 March 1999 (1999-03-04), pages 161-167, XP004159146 the whole document -----</p>	

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